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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YURI GULEVICH, ISABELLA COMURATI,
ANTONIO CRISTOFORI, TIZIANO DALL'OCCO,
GIAMPIERO MORINI, FABRIZIO PIEMONTESE, and
GIANNI VITALE

Appeal 2011-001681
Application 10/594,780
Technology Center 1700

Before EDWARD C. KIMLIN, TERRY J. OWENS, and
RAE LYNN P. GUEST, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 18, and 20-23. We have jurisdiction under 35 U.S.C. § 6(b).

Claim 18 is illustrative:

18. Lewis base adducts comprising a compound of formula $\text{MgCl}_n(\text{OR})_{2-n}$, and an aprotic Lewis base (LB) that are in molar ratios to each other defined by formula $\text{MgCl}_n(\text{OR})_{2-n} \text{LB}_p$ in which n is from 0.1 to 1.9, p ranges from 0.4 to 3, R is a $\text{C}_1 - \text{C}_{15}$ hydrocarbon group, and the aprotic Lewis base is

selected from $C_2 - C_{20}$ aliphatic ethers and alkyl esters of $C_1 - C_{20}$ aliphatic carboxylic acids.

The Examiner relies upon the following references as evidence of obviousness (Ans. 2):

| | | |
|-------------------|-------------|---------------|
| Scata | 4,220,554 | Sep. 02, 1980 |
| Vladimir Zakharov | WO 96/32426 | Oct. 17, 1996 |

Appellants' claimed invention is directed to a Lewis base adduct comprising a magnesium compound of the recited formula and an aprotic Lewis base in the claimed molar ratios.

Appealed claims 18, 22 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Scata. Claims 20 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Scata in view of Zakharov.

Appellants do not present separate arguments for any particular claim in the groups of claims separately rejected by the Examiner. Accordingly, claims 18, 22 and 23 stand or fall together, as do claims 20 and 21.

We have thoroughly reviewed each of Appellants' arguments for patentability, as well as the Specification data relied upon in support thereof. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejections for essentially those reasons expressed in the Answer.

We consider first the § 103 rejection of claims 18, 22 and 23 over Scata. Scata, like Appellants, discloses a method of polymerizing alpha-olefins with a catalyst comprising an adduct of a magnesium chloride

compound and a Lewis base as an electron-donor. The reference magnesium compound is present in a molar amount of 0-2, which range encompasses and nearly coincides with the claimed ratio of 0.1-1.9. Scata's molar amount for the Lewis base is less than 1, which range overlaps the claimed range of 0.4-3.0. In addition, Scata teaches that the Lewis base may be an ether (col. 2, ll. 62-65). Accordingly, based on the Scata disclosure, we concur with the Examiner that one of ordinary skill in the art would have found it obvious to formulate a Lewis base adduct within the scope of the appealed claims.

Appellants maintain that any prima facie case of obviousness has been rebutted by unexpected results demonstrated in the present Specification. Appellants offer that Specification Example 6, which comprises 0.49 mole of Lewis base, exhibits an unexpectedly high polymerization activity compared to Comparative Example 7, which comprises only 0.17 mole of Lewis base. However, we are in full agreement with the Examiner that the singular comparative example proffered by Appellants is hardly commensurate in scope with the degree of protection sought by the appealed claims. *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983); *In re Clemons*, 622 F.2d 1029, 1035 (CCPA 1980). The 0.49 mole of Lewis base is at the lower limit of the claimed range of 0.4-3, and Appellants have not shouldered their burden of demonstrating that the improvement and yield fairly translates across the claimed range. Also, as noted by the Examiner, the Specification example does not use the polymerization process disclosed by Scata. Furthermore, there is no evidence of record referenced by Appellants which establishes that the Specification results would be considered truly unexpected by one of ordinary skill in the art. *In re Merck*

& Co., 800 F.2d 1091, 1099 (Fed. Cir. 1986); *In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972).

Appellants also submit that the claimed Lewis base adduct is selected from aliphatic ethers and alkyl esters of aliphatic carboxylic acids, whereas Scata's preferred compounds are alkyl esters of aromatic acids. However, it is well settled that a reference must be considered for all that it fairly teaches, preferred and non-preferred embodiments alike, and we agree with the Examiner that Scata's teaching of ethers would have fairly suggested the claimed ethers of aliphatic carboxylic acids as well as those of aromatic acids. Appellants have demonstrated no criticality for the claimed class of ethers. Further, Appellants present no argument or evidence to refute the Examiner's finding that Scata references n-butyl ether (Scata, col. 7, ll. 21-27), which is an aliphatic ether, or the Examiner's rationale that n-butyl ether would, thus, have been obvious to one of ordinary skill in the art as falling within the broader teaching of "ethers" as electron-donor compounds (Ans. 7).

Concerning the § 103 rejection of claims 20 and 21 over Scata in view of Zakharov, Appellants make the erroneous argument that Zakharov teaches that tetrahydrofuran is only used as an inert solvent, but not as an electron donor, as claimed. As correctly pointed out by the Examiner, however, Zakharov expressly discloses that ethers are examples of effective electron donors and, in particular, tetrahydrofuran (p. 6, l. 25). Consequently, Appellants have not rebutted the Examiner's reasonable conclusion that, since both Scata and Zakharov disclose a catalyst system suitable for polymerizing olefins comprising an alkoxymagnesium halide, a titanium compound and an electron donor, one of ordinary skill in the art

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would have had a reasonable expectation of successfully using tetrahydrofuran as the electron donor in Scata's catalyst.

In conclusion, based on the foregoing, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. §1.136(a)(1)(v).

AFFIRMED

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